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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,772	12/03/2003	David D. Nolte	12258-0021	4208
25267 7590 12/31/2007 BOSE MCKINNEY & EVANS LLP JAMES COLES 135 N PENNSYLVANIA ST SUITE 2700 INDIANAPOLIS, IN 46204			EXAMINER RAMILLANO, LORE JANET	
			ART UNIT 1797	PAPER NUMBER
			MAIL DATE 12/31/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/726,772

Applicant(s)

NOLTE ET AL.

Examiner

Lore Ramillano

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-18 and 45-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-18 and 45-57 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/3/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/1/04, 3/15/06, 10/15/07.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 12-18 (Group II) in the reply filed on 10/8/07 is acknowledged.
2. Claims 1-11 and 19-44 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10/8/07.

Status of Claims

3. In applicant's reply filed on 10/8/07, applicant cancelled claims 1-11 and 19-44; and added new claims 45-57. Claims 12-18 and 45-57 are pending and under examination.

Priority

4. The disclosure of the prior-filed application, Application No. 60/300,277, provides adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application.

Claim Objections

5. Claim 15 is objected to because of the following informalities: it appears that the language in claim 15 repeats the limitation, "first plurality of spaced-apart regions." Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 12-14, 18, and 53-57** are rejected under 35 U.S.C. 102(b) as being anticipated by Klein et al. ("Klein," US 5900935).

Klein discloses a device including: a substrate (i.e. fig. 1, 26) including a first plurality of spaced-apart regions configured to bind the first analyte; an optical source (i.e. fig. 1, 30) configured to generate a probe beam which illuminates the first plurality of spaced-apart regions in a sequential manner and interacts with the substrate to form a signal beam; an interferometer (fig. 1, 10) configured to combine with an adaptive optical element a reference beam and the signal beam, the combination of the reference beam and the signal beam generating an output beam; and a detector (i.e. fig. 1, 46) configured to detect the presence or absence of the first analyte based upon the output beam.

Klein further discloses the following: the probe beam is reflected by the substrate to form the signal beam; the probe beam is transmitted through the substrate to form the signal beam; the interferometer operates in a quadrature condition; the interferometer includes an adaptive holographic element; the substrate includes a first surface lying substantially in a first plane and a second surface lying substantially in a second plane, the first plane being offset vertically from the second plane, each of the first plurality of regions lying on the first surface; and wherein the optical source is positioned relative to the substrate such that when the probe beam is directed at one of the first plurality of regions an interference characteristic is produced; a first portion of the probe beam interacts with a target portion of the first surface holding one of the first plurality of regions, and a second portion of the probe beam interacts with a portion of the second surface adjacent to the target portion of the first surface, the first and second portions of the probe beam

being combined to produce the output beam, the output beam having a first form when the first analyte is not bound to the target portion of the first surface and a second form when the first analyte is bound to the target portion of the first surface; the output beam includes the first portion of the probe beam reflected from the substrate and the second portion of the probe beam reflected from the substrate; the output beam includes the first portion of the probe beam transmitted through the substrate and the second portion of the probe beam transmitted through the substrate (i.e. column 3, line 39 to column 9, line 37).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. **Claims 15-17 and 45-52** are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein in view of Bernstein et al. ("Bernstein," US 5478750).

Klein does not specifically disclose a substrate having a second plurality of regions and concentric tracks, and a motor to spin the substrate.

In fig. 2, Bernstein discloses an apparatus for photometric analysis. The apparatus comprises a light source, a detector, and a substrate (20) that includes a first and second plurality of spaced-apart regions and concentric tracks and a motor (i.e. fig. 5, 80) to spin the substrate.

It would have been obvious to a person of ordinary skill in the art to modify Klein's substrate by including a second plurality of spaced apartment regions and concentric tracks because it would be desirable to include regions on the substrate which can hold the samples to be analyzed. Furthermore, it would be obvious to a person of ordinary skill in the art to modify Klein's substrate by including a motor to spin the substrate since it would be desirable to have a mechanical means to spin the substrate to insure that the sample in the regions are thoroughly mixed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lore Ramillano whose telephone number is (571) 272-7420. The examiner can normally be reached on Mon. to Fri. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The

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fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lore Ramillano
Examiner
Art Unit 1797



LYLE A. ALEXANDER
PRIMARY EXAMINER